THE GENUS CENTRIS IN CALIFORNIA
(Hymenoptera, Apoidea)

BY P. H. TIMBERLAKE

University of California Citrus Experiment Station, Riverside

The Californian species of *Centris* are *C. rhodopus* Ckll., *C. rhodoleuca* Ckll., *C. pallida* Fox, *C. hoffmanseggiæ* Ckll., *C. tiburonensis* Ckll., *C. cockerelli* Fox, and the two new species described below. *Centris rhodopus* is common during the summer on the deserts of southern California, and I have collected a few in Bear Valley (7000 feet), San Bernardino Mountains. One female has been taken at Riverside, but it must have been a stray or wind-blown specimen, as the species almost surely does not nest in the cismontane area. Of *Centris rhodoleuca* I took three males in Morongo Valley, on *Croton californica*, August 4, 1933. *Centris pallida* is common in the spring and early summer on the Colorado desert and near Needles, at flowers of *Cercidium*, *Olneya* and *Dalea*. It has also been taken by C. M. Dammers in the upper portion of Cajon Canyon. *Centris hoffmanseggiæ* occurs on the western part of the Mohave desert and locally in different parts of the cismontane area of southern California. I have taken it at flowers of *Lotus scoparius*, collecting pollen, near Perris. The male has been taken at The Gavilan, Lytle Creek wash and on the Mohave desert near Victorville, on flowers of *Pentstemon antirrhinoides*, *Dicentra chrysantha* and *Larrea divaricata*. Cockerell based his *C. hoffmanseggiæ davidsoni* on a male from Banning, which is like the males recorded above, but it seems to me that the subspecies is based on too feeble characters. *Centris tiburonensis* is very similar to *C. pallida*, but smaller. I took both sexes flying with *pallida* at flowers of *Dalea spinosa* near Needles, on June 5, 1938. *Centris cockerelli* occurs rather commonly on the Colorado desert in the spring and early summer at flowers of *Cercidium*, *Krameria* and of several species of *Dalea*. It is certainly the same species as the *C. lanosa* of New Mexico and southern California (Fox and Cockerell records), but the male does not quite agree with Cresson's description of the male from Texas. It is, however, probably not more than subspecifically different from *C. lanosa* Cress.

The types of the following two species are in the collection of the Citrus Experiment Station, Riverside.

Centris californica Timberlake, new species

Nearest *C. hoffmanseggiæ* Ckll., but differs in the dentition of mandibles, lack of a yellow spot on clypeus and labrum, and in having the pubescence of abdomen shorter and much appressed, as well as partially dark on the second tergite.

Female. Black. Mandibles red at middle. Legs rufescent, sometimes weakly so, except small joints of tarsi. First two segments of abdomen sometimes rufescent. Antennæ at most slightly rufescent. Tegulæ testaceous. Wings dusky hyaline, the nervures blackish. Pygidium rather dark red. Pubescence of head and thorax pale ochraceous, becoming fuscous on the sternum, and of the usual density and texture. Hair of legs black, or blackish, the scopa of hind tibiæ and basitarsi dense as usual. Hair on under side of front basitarsi dark reddish. Pubescence of abdomen short, closely appressed, especially on tergites 2 and 3, longer and erect at base of tergite 1, and with longer erect hairs interspersed on 4 and 5. Hair of tergite 1 entirely pale ochraceous. That of tergite 2 more or less dusky or black on disk, but pale at base and sides and pale for a short distance at apex except more or less broadly in middle. Hair of abdomen, including venter, otherwise black. Head broader than long, the face nearly as wide as length of eyes. Mandibles somewhat broadened toward apex. The inner margin crenulate subapically, thus faintly marking off two short, bluntly rounded, teeth. (In *C. hoffmanseggiæ* the inner margin of mandible similar except that just basad is a third well-developed subacute tooth). Third antennal joint subequal to four following joints combined. Head shining. Clypeus weakly convex, finely and rather closely punctured at sides, broadly impunctate in middle. Frons and vertex finely, closely puctured, except a small area in front of ocelli and area between ocelli and eyes, impunctate. Thorax, especially mesonotum, more coarsely punctured than frons and dullish, except scutum posteriorly and disk of scutellum. Basal area of propodeum not enclosed, slightly dullish, minutely punctured and thinly hairy. Abdomen above shining, with fine, almost dense, setigerous punctures. Length, 14-15 mm.; anterior wing, 10-11 mm.

Holotype, female, collected at Kerman, Fresno County, California, on mustard, September 24, 1933 (P. A. Harvey). One female (paratype) at flowers of *Cleomella obtusifolia*, Barstow, San Bernardino County, September 12, 1924 (Timberlake).

Centris rhodomelas Timberlake, new species

Differs from all other species in the color of the hair, which is dark red on the notum, otherwise almost entirely black in the female. There seems to be no similar species with which it could be confused.

Female. Shining black. Mandibles with a red blotch on apical tooth. Flagellum rufescent beneath. Tegulæ dark ferruginous. Apical joint of tarsi dark red. Wings pale fuliginous, subhyaline, the nervures black. Pubescence dark fox-red on mesoscutum, scutellum and metanotum, and black on head, under parts of thorax, including pleura and propodeum, and on legs and abdomen. Hair of tubercles reddish, tipped with black. Hair on under side of front tarsi and on anterior edge of under side of middle tarsi dark red. Hair of first tergite dusky reddish, appearing either dark or rather light at different angles of vision. Pubescence of the usual density and texture on head, thorax and legs. Pubescence of abdomen thin and appressed, the surface of tergites being well exposed. Hair on tergite 2 shortest, that on following segments longer and less appressed. Hair at base of tergite 1 rather long and erect, but that on the disk appressed. Head wider than long, the width of face subequal to length of eyes. Inner margin of mandibles with three large subacute teeth, the apical tooth much longer and also subacute. On outer surface of mandibles opposite the basal inner tooth is a pencil of dark reddish hair, and the inferior margin has a thin fringe of long hairs of similar color. Third antennal joint subequal to four following joints combined. Clypeus strongly convex, finely and sparsely punctured, with a broad impunctate area in the middle. Frons and vertex more finely and closely punctured. Thorax closely and finely punctured, the notum shining, the pleura tessellate and dull. Basal area of propodeum, except apex, tessellate, slightly dullish, finely punctured and thinly hairy. Tergites shining, with minute setigerous punctures. Length, 14.5 mm.; anterior wing, 11.6 mm.

Male. Black. Apical joints of tarsi and under side of flagellum ferruginous. Stripe on inner margin at base of mandibles, labrum, clypeus, transverse supraclypeal mark and under side of scape, pale yellow. Pubescence of notum as in female, but hair of head and remainder of thorax dull ochraceous, slightly tinged with brown, becoming fuscous on upper part of frons and tinged with reddish on vertex behind ocelli. Hair of abdomen black, that of first two tergites ochraceous, tinged with brown, and tergites 2 to 4 with a paler, more whitish, apical fringe on each side. Hair of legs mainly light, like that of under parts of thorax, but becoming black on the middle and hind tibiæ and basitarsi, except the long fringe on dorsal margin which is poorly developed on hind legs (about as in *C. hoffmanseggiæ* Ckll.). Hair on anterior side of front tibiæ and tarsi also darkened. Head shaped as in female, but eyes larger, the face moderately narrow or about equal in width to two-thirds the length of eyes. Eyes not diverging except below the widest part of clypeus. Clypeus more finely punctured than in female. Sculpture of head and thorax otherwise similar. Abdomen less shiny, the punctures of tergites stronger and much closer, the surface also more hairy, with the hairs longer than in the female and suberect. Mandibles shorter, the inner margin with

only two teeth, the apical tooth less elongate. Third antennal joint somewhat shorter than four following joints combined. Length, 14 mm.; anterior wing, 4 mm.

The hair on the notum of male paratypes varies to fulvous, but is still redder than in other Californian species, except in one much faded specimen.

Holotype, female, collected at Mariposa, California, June 18, 1938 (R. M. Bohart), the allotype at same place, June 13, 1938 (J. M. Ferguson). Also the following paratypes: One female, one male, Mariposa, June 13 (Ferguson and Bohart), and ten males, June 18 (R. M. Bohart); one male, Santa Paula, June 5, 1927 (collector unknown); and three males, Sespe Canyon, Ventura County, June 9, 1926 (collector unknown). The Sespe Canyon paratypes, except one, returned to Mr. Mont A. Cazier, and the remainder of the paratypes, except one, are in the Bohart collection.

DRYOTRIBUS AND MACRANCYLUS ARE NOT AMERICAN COSSONINE GENERA

(Coleoptera, Curculionidæ)

BY ELWOOD C. ZIMMERMAN

Bernice P. Bishop Museum, Honolulu, T. H.

To one working with American literature, it appears that the genera *Dryotribus* and *Macrancylus* of the Cossoninæ are American. The purpose of this paper is to call attention to the fact that they are not. In my recently completed report[1], I had occasion to inquire into the status of these genera, and it is worth while to present my findings to continental students in this more available journal.

Genus DRYOTRIBUS Horn

Dryotribus Horn, 1873, Proc. Amer. Philos. Soc. 13:433.

Thalattodora Perkins, 1900, Fauna Haw. 2:146. Synonymy by Champion, 1909, Ent. Mo. Mag. (2) 20:123.

This genus was erected by Dr. Horn for the reception of a species (*D. mimeticus*) found in Florida. In 1900 Dr. Perkins named the same insect *Thalattodora insignis* and based his description upon a single specimen found under a log on the coast of the Hawaiian island of Lanai. In more recent years the species has been found to have a wide distribution and has now been recorded from many places including Florida, West Indies, the main and outlying Hawaiian Islands, Wake Island, Australia, and the Ryukyu Islands, between Japan and Formosa.

[1] Zimmerman, E. C. Synopsis of the Genera of Hawaiian Cossoninæ with notes on their Origin and Distribution. Occas. Papers, B. P. Bishop Museum, Vol. XV, No. 25, pp. 271-293, 1940.